ACUBRITE ™

High Bright Rugged 15’’ Touch Screen

Preface

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Version 2.0

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Introduction

Welcome to a fantastic sightseeing world. This new technology will bring you a whole new feeling about LED “monitor”. We show here some of the major advantages of the Acubrite™ 15"touch screen high bright LED back-lit monitor.

Hardware Installation

This section will guide you through the correct installation procedures of the monitor.

Unpacking

After you unpack your LED Monitor, please make sure that the following items are included in the carton and in good condition. If you find that any of these items are damaged or missing, please contact your dealer immediately.

- Acubrite™ 15" touch screen LED monitor

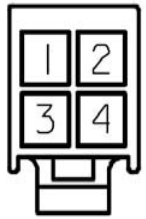
- Cable (VGA, USB, Serial, Audio)

Standard - 12’ cable

(Optional. 6’,10’ & 15’ available! Contact your dealer if you require optional length.)

- Power cable

Yellow/G --- Ground
Blue --- Ignition
Brown --- +12V Input



Monitor Power connector

Pin 1& pin 3 --- Power
Pin 2 --- Ground
Pin 4 --- Ignition

Cautions:

Operating**: Use IGNITION wire feature where possible**.

No ignition control desired: twist, join, power and ignition wire together.

Turn off monitor when leaving vehicle.

Do not place over hot areas e.g., Vents.

Clean regularly, annually at a min.

Installation

1. **Turn power off both Computer and Display** before making any connection.

2. Connect the power cable (12v AC/DC adapter or 8v – 30v DC). See **"Caution"**: Ignition control option (page 2)

3. The LED monitor comes with a 15-pin video cable; (you may use this cable for both IBM PC's & compatibles and Macintosh.)

4. Tighten the screws of the Display cable until the connectors are fastened securely. (Do not over tighten)

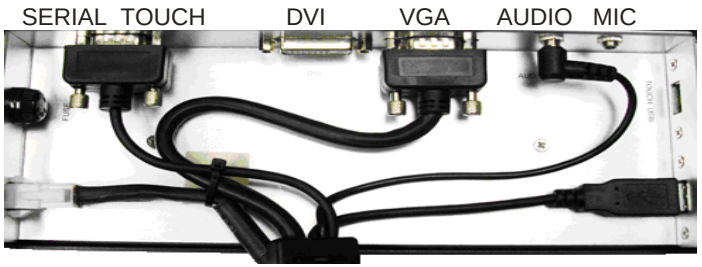
5. Switch on power **(#1)** to the monitor, then **(#2)** to the computer system.

Note: Red LED should be on when the monitor is powered on or select a error signal source.
Green LED should be on when both monitor and computer are powered on.

6. Dual Touch Controller:
   - Serial touch controller (RS 232).
   - USB touch controller.

Note: **Do not use Serial touch port and USB port simultaneously**.

The following picture provides the connection outline



The Display Timing

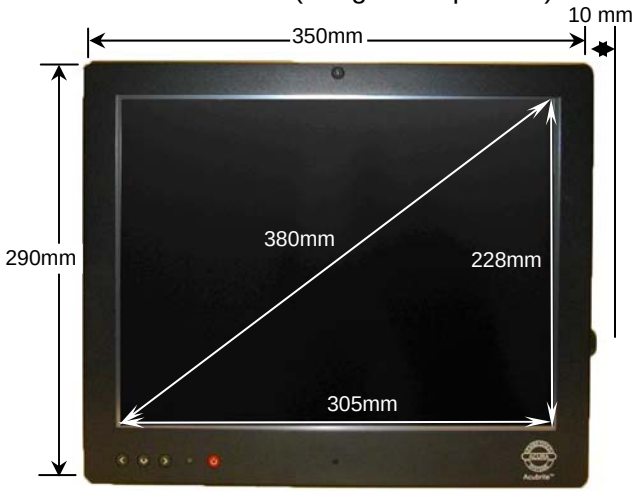
Applicable video timing

The following table lists the better display quality modes that the LED monitor provides. If the other video modes are input, the monitor will stop working or display unsatisfactory picture quality.

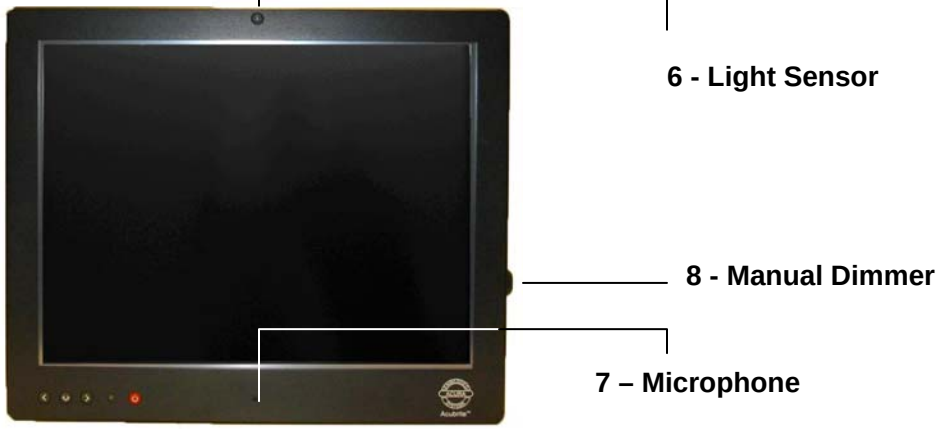
VESA Modes					
Mode	Resolution	Total	Nominal Frequency ±0.5KHz	Nominal Frequency ±0.5KHz	Nominal Pixel Clock (MHz)
DOS	720x400@70Hz	900x449	31.469	70.087	28.322
VGA	640x480@60Hz	800x525	31.469	59.940	25.175
	640x480@72Hz	832x520	37.861	72.809	31.500
	640x480@75Hz	840x500	37.500	75.000	31.500
SVGA	800x600@56Hz	1024x625	35.156	56.250	36.000
	800x600@60Hz	1056x628	37.879	60.017	40.000
	800x600@72Hz	1040x666	48.077	72.188	50.000
	800x600@75Hz	1056x625	46.875	75.000	49.500
XGA	1024x768@60Hz	1344x804	48.363	60.004	65.000
	1024x768@70Hz	1328x806	56.476	70.069	75.000
	1024x768@75Hz	1312x800	60.023	75.029	78.750
IBM Modes					
EGA	640x350@70Hz	800x449	31.469	70.086	25.175
DOS	720x400@70Hz	900x449	31.469	70.087	28.322
VGA	640x480@60Hz	800x525	31.469	75.000	31.500
XGA	1024x768@72Hz	1304x798	57.515	72.100	75.000
MAC Modes					
VGA	640x480@60Hz	800x525	31.469	59.940	25.175
SVGA	832x624@75Hz	1152x667	49.725	74.551	57.2832
XGA	1024x768@75Hz	1328x804	60.927	74.927	80.000

The Display Outline Dimensions

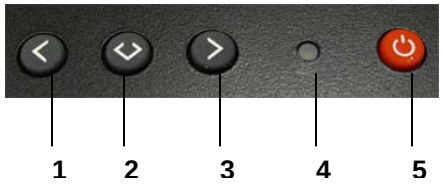
Acubrite™ 15"(Weight: 8.5 pounds)



The Display Controls



Control Button



1. **Up Key >:** Hot key for adjusting bright level. Decrease item number or item value.
2. **Menu Key:** Enter to the OSD adjustment menu. It also used for go back to previous menu for sub-menu, and the change data don't save to memory.
3. **Down Key <:** Hot key for Cycling through 2 different input sources (1. VGA , 2 . DVI). Increase item number or value of the selected item.
4. **Power LED:** Power ON-RED or Green (Right signal in).
5. **POWER SWITCH (RED):** Pushing the power switch will turn the monitor on. Pushing it again to turn the monitor off.
6. **Light Sensor:** Automatically adjusting brightness.
7. **Microphone:** monitor's own microphone.
8. **Dimmer Knob:** manually adjusting brightness
9. **Speaker:** Two monitor's speakers at back side.
10. **USB Extension:** Monitor's USB Ext.at left side.

Screen Adjustment Operation Procedure

1. Entering the screen adjustment
The setting switches are normally at stand-by.
Push the **<Menu-Key>** once to display the main menu of the screen adjustment. The adjustable items will be displayed in the main menu.

2. Entering the settings
Use the **<Down-Key>** and **< Up-Key >** buttons to select the desired setting icon and push the **< Menu-Key >** button to enter sub-menu.

3. Change the settings
After the sub-menu appears:
Use the **<Down-Key>** and **< Up-Key >** buttons to change the setting values.

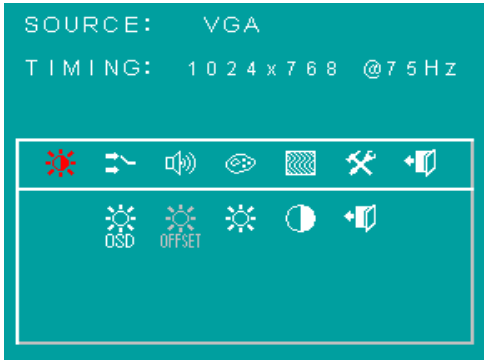
4. Save
After finishing the adjustment, push the **< Menu-Key >** button to memorize the setting.

5. Return & Exit the main menu
Exit the screen adjustment; push the **"<Menu-Key >"** button. When no operation is done around 30 sec (default OSD timeout), it goes back to the stand-by mode and no more switching is accepted except <MENU> to restart the setting.

The Screen Adjustment

Main Menu < Menu-Key>
You can adjust the brightness, contrast, display colors, the horizontal and vertical position of the display and OSD menu, etc. through the main menu display. The **<Down-Key>** and **<Up-Key>** are used to scroll through items within the menu. The selected item is **highlighted** as the scrolling move along. The < **Menu-Key** > key is used to activate the **highlighted** item. During this state, < **Menu-Key** > key is used to close the OSD menu from the screen.

Menu key Function:

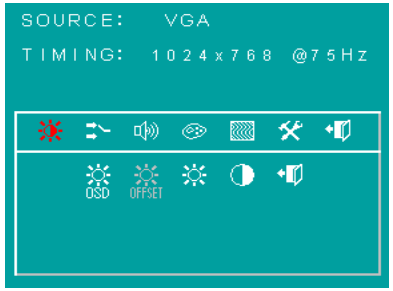


There are 7 sub pages inside the OSD manual, Brightness, Signal Source, Sound, Color, Image, Tools, and Exit. See below:

< Menu-Key >

	Contrast & Brightness	Setup the contrast and brightness.
	Signal source	You can select signal source.
	Speaker	To adjust the volume of speakers.
	Color	To adjust image colors.
	Picture	Setup the image position and size within the panel.
	OSD	OSD functions
	Exit	Exit setting

When you press **"<Menu-Key >"** button, you enter the "Brightness" sub page. You will see 5 selections:

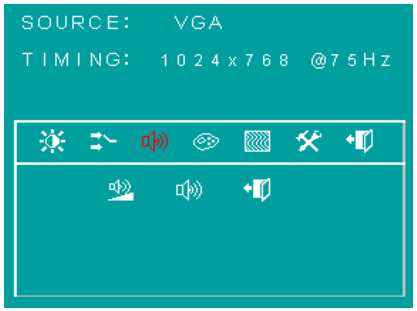


OSD	**OSD Brightness**	Setup the contrast and brightness.
	Adjust the brightness	Press "left"dim to "0", while press "right" to increase to "100".
Light	**Ambient light sensor**	Accompany with ambient light sensor to auto dimming.
VR	**Potentiometer**	Adjust VR function.
OFFSET	**Ambient light sensor with OSD offset**	Adjust min. luminance to fit your application.
	Contrast	Press "menu" and "right" can adjust the contrast from "0" to"100"

When you press **"<Menu-Key >"** button, you enter the "Signal source" sub page. You will see 5 selections:

VGA		Change source to VGA
DVI		Change source to DVI

When you press **"<Menu-Key >"** button, you enter the "Speaker" sub page. You will see 2 selections:

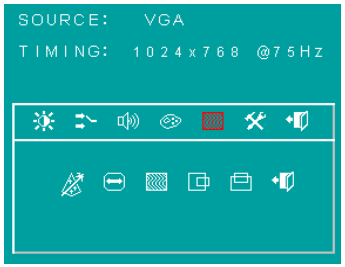


	Audio Volume	Audio volume adjustment
	Mute	Mute the speaker

When you press **"<Menu-Key >"** button, you enter the "Color" sub page. You will see 6 selections for color adjustment:

	Auto Color	Optimal color performance.
sRGB	**SRGB**	Windows standard color setting.
	Color Tempture	3 options in this selection.
	Color Tempture User	
6500	**Color Tempture_6500K**	Warm color scheme
9300	**Color Tempture_93OOK**	Cold color scheme

When you press **"<Menu-Key >"** button, you enter the "Image" page" sub page. You will see 5 selections:



	Auto just	Adjust the optimal frequency of horizontal and vertical.
	Clock	Adjust manually by "Clock"
	Phase	Adjust "double image" to make it perfect image
	HPos	Shift the screen horizontally
	Vpos	Shift the screen vertically

When you press **"<Menu-Key >"** button, you enter the "OSD Tool" " sub page. You will see 6 selections:

OSD	**OSD Control**	4 more options
	OSD_time	Time of OSD from 2 to 16 sec.
	PhaseOSD_HPos	Move the OSD horizontally over the screen
	OSD_VPos	Move the OSD Vertically over the screen
	Factory_Reset	Back to the factory default setting
	Sharpness	Make the characters looks sharper

Installing TouchKit Touch Screen Controller

TouchKit is the software which contains drivers of the touch panel controllers.

Follow these steps to install TouchKit.

1. Insert the CD to CD-ROM.
2. Choose the appropriate OS (for example, if you are using windows 2000 or XP, choose Win2000 / XP)
3. Follow the on-screen instructions to complete the installation.

Configuration Utility

There are five property pages in TouchKit utility, and they are **General**, **Setting**, **Edge coefficient**, **Monitors** and **About**. Each property page contains different functions for users to do the adjustments. Therefore users can easily manage all the TouchKit controllers through TouchKit utility.

- General property page contains the functions of language selection, devices add/remove, 4 points calibration, Draw test and Advanced.
- There are three functional groups in Setting property page, and at the upper section of the property page is sound option; at the middle section is Mouse Mode; and at the lower section is Double Click Adjustment.
- Edge Coefficient property page contains the functions of Edge Compensation for Top, Bottom, Left, Right, X Axis and Y Axis.
- There are three functions in Monitors property page, and they are Multiple Monitors, Split Monitors and One Point Calibration.
- About contains the information about TouchKit

Troubleshooting Tips

In the event that you experience trouble with your Display, check the following items before contacting the dealer from whom the Display was purchased. The most common problems usually involve an incorrect connection from the Video Card to the Display. We recommend that you also consult your Video Card User's manual during the Troubleshooting Procedure. Do not exceed the maximum refresh rate recommended for the display.

Problem	Troubleshooting Tip
No image on display screen	• Check that power cord of Computer has been connected securely into wall outlet or grounded extension cable or strip. • Check that power switch of the Display has been pressed and LED on the front of Display is lit. • Check that Video(Signal) cable from the Display has been securely and correctly connected. • Check that Video Card is firmly seated in card slot of Computer motherboard. • Check that the video input from the Video Card falls within the timing range
Abnormal image	• Check that the video input from the Video Card falls within the timing range. • Check that Video(Signal)Cable from the Display has been securely and correctly connected to the video connector at the rear side of the Computer.
Colors of image on screen are abnormal	• Check that Video(Signal)Cable from the displays has been securely and correctly connected to the 15-pin Video Connector at the rear side of the computer
Disturbances on screen	• OSD adjustment is incorrect. Please consult section for OSD screen adjustment procedures.

ACURA INSTALLATION INSTRUCTIONS

The following instruction is designed to assist the technician or customer in the basic steps of installing Acura products and makes the assumption that commonsense and previous experience will aid in the installation. Safety and caution must always take precedence in the installation of any electrical or mechanical system. The correct tools, parts, fasteners, safety equipment as well as any instructions, diagrams and schematics must be gathered, reviewed or made available prior to beginning the process of installation.
The installer is required to prepare in advance the work area and see that the electrical or mechanical needs of the project are in place before starting and that any other possible interference are addressed. A review of the Installation Check List is critical since this list needs to be checked off and a copy sent back to the supplier so it can be attached to the Customer file. All projects require the filling out of appropriate forms or else warranty may be limited.
The list and/or these Installation Instructions are not designed to be exhaustive or restrictive they are part of a process of total quality management and will help the installer to be in control of the project.

Please refer to caution and installation guides provided with each piece of equipment, component or accessory.
In order to receive the best performance out of a new Acura computer system all components should be installed in a way that allows for ease of operation by customer's trained personnel or trainer under regular operating conditions.
Please take a moment to check off the following boxes so the undersigned can verify that the installation is complete and operational. If something is not working as initially configured and tested please inform the installer immediately so that the problem can be fixed as promptly as possible. Follow up with a Corrective Action Report (CAR) where appropriate.

Below are some points or conditions to watch out for: (Please initial them off as you proceed)

☐ All parts, components and accessories are received and prepared for installation

☐ Areas to receive equipment are clear and free from obstruction

☐ The mounting system selected is appropriate for the apparatus.

☐ Before attaching brackets make sure there are no hidden fluid or wiring obstructions

☐ Use appropriate fasteners and backing as required.

☐ Ensure **Power Sources** are identified and adequate to operate system without over taxing available battery reserve. An Amp hour survey should be completed and additional battery capacity addressed. Power is direct from battery to a distribution fused block.

☐ Before attaching any wiring be sure that power leads are correctly fused and correctly identified (+ or –) as well as correct voltage and wire size (12 ga power supply minimum) **Caution:** Incorrect connection of wires will affect the electronics and will void warranty – (Burnt wiring and blown circuitry is evidence of improper installation)

☐ Fasteners will require lock washers, washers, isolation or proper grounding

☐ Computer is adequately hidden and out of the way yet readily accessible with good ventilation.

☐ Touch screen is mounted securely to the apparatus.

☐ Touch screen is in a location where desired user/s can comfortably operate the unit

☐ Unit is fully functional while the engine or radio of the apparatus is running and free of RF

☐ Connections, components or accessories are not impeding the duties of personnel

☐ Factory operating system (locked) and all factory applications are functional

☐ All service personnel and trainers understand the components and wiring for all applicable systems as well as In-line fuses are accessible and their locations are known

☐ Administrative controls for systems are in the hands of trained service personnel

Note: Check twice install once.

For Assistance call your sales and service representative first for guidance.

_____	_____	_____
Print Name	Signature of Chief or Representative	Date of signature
_____	_____	_____
Print Name	Signature of Authorized Installer	Date of signature

Customer Name: _____

Location: _____

Serial Number: _____

VIN Number: _____

Unit Number: _____

Date Installed: _____

Who Installed: _____

Contact Number: _____

Notes:

With the unique set of products, Acura Embedded Systems remains committed to its goal of providing trouble-free and customer-friendly service. A special customer service unit has been set up specifically to cater to our esteemed customers' needs.

Technical Support:

North American **Technical support contact your Salesperson**

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